

New Smog Check Inspection Procedures and Equipment

Questions from Stations and Technicians

The following are Smog Check station and technician questions from BAR workshops held in the spring of 2012. At these workshops, BAR presented proposed draft regulations on new inspection procedures and equipment and solicited industry comment.

EQUIPMENT REQUIREMENTS - OBD Inspection System (OIS) Equipment

- 1) **Will the Data Acquisition Device (DAD) be a separate piece of equipment from the BAR-97?**
Yes, the DAD will be a stand-alone piece of equipment. It will be part of a new OBD Inspection System (OIS), which will operate independently of the BAR-97 analyzer.
- 2) **What is the cost to stations for the DAD?**
Since BAR does not have the authority to control equipment cost, the DAD manufacturers will set the price of their equipment.
- 3) **What will be the cost of the OBD Inspection System software to stations?**
The Smog Check inspection software will run on a State-controlled server and will be accessed over the station's Internet connection, similar to online banking. As a result, the Smog Check inspection software will not be purchased by stations. Any software drivers connecting the DAD to a computer should be included in the purchase cost of the DAD.
- 4) **Will stations have to pay an Electronic Transfer Fee (ETF) for DAD tests?**
Yes. Stations will still be required to pay the ETF for inspections performed on the OBD Inspection System (OIS). This fee goes directly to BAR's contractor who maintains and operates the Smog Check database, and the OIS inspection software.
- 5) **Will the OBD Inspection System (OIS) prompt for vehicles that need a tailpipe test?**
No. Use the new Smog Check Manual to determine which vehicles require a tailpipe test on the BAR-97 and which vehicles require an On Board Diagnostic inspection on the OIS. Although the BAR-97 will allow any vehicle inspection, it is illegal to inspect OIS vehicles on the BAR-97. The OIS will not issue certificates on vehicles requiring a BAR-97 test.
- 6) **What equipment will be required to perform an inspection on most model-year 2000 and newer vehicles?**
The OBD Inspection System (OIS) is required. It is comprised of a BAR certified Data Acquisition Device (DAD), and other equipment including a computer, a printer, and a bar code scanner. BAR will publish which versions of Microsoft operating system and Internet Explorer are required. Stations may purchase and use off-the-shelf computers, bar code scanners, and printers.
- 7) **Can I run other software on the OBD Inspection System (OIS) computer?**
Yes. Other software can be used on the OIS computer to perform functions other than a Smog Check. Since the OIS computer is not a BAR certified device, the station owner may use the computer at his/her discretion. However, it is also the owner's responsibility to maintain the computer.

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EQUIPMENT REQUIREMENTS - OBD Inspection System (OIS) Equipment (continued)

- 8) Will the State control the cost of a Smog Check performed on the OBD Inspection System (OIS)?
The Smog Check inspection fee charged by a station will continue to be market-driven and set by each individual station.
- 9) Can the DAD be used as a mobile device outside of the station?
No. The DAD can only be used at the registered station address. California Code of Regulations section 3340.15 (a) states "The testing and repairing of vehicles shall be performed only in a work area of the station that has been approved by the bureau during the licensing inspection." The Smog Check Manual, section 1.8.3 requires, "The BAR-97 EIS and the OIS shall be used within a building. The BAR-97 EIS and the OIS shall not be used in an environment that would subject them to excessive heat, cold, dust, or moisture."
- 10) Will the OBD Inspection System (OIS) need a dedicated phone line or Internet connection?
No. The OIS will not need a dedicated phone line or dedicated Internet connection. The OIS may share an Internet connection with other devices in the station. The BAR-97, however, will continue to require a dedicated phone line.
- 11) What are the Internet connection requirements?
Any type of Internet connection (Cable, DSL, satellite or dial-up) will be allowed, but connection speed may effect time to conduct a test.
- 12) Will stations that only have the OBD Inspection System (OIS) be allowed to repair 1999 model-year and older vehicles?
Yes. The BAR-97 EIS is only required to inspect certain vehicles. BAR does not require it to repair vehicles. Refer to the "Equipment and Reference Material Requirements" table, located in the new Smog Check Manual.
- Since accepted trade standards specify how repairs are performed and verified, the trade standards shall dictate what repair equipment is required for a particular repair. Depending on the trade standard, a BAR-97 EIS or other tailpipe emissions measurement tool (e.g., a 5 gas analyzer) may or may not be necessary to perform or verify certain repairs.
- All stations must possess the tools and reference materials for the types of vehicles being inspected and/or repaired. For example, when repairing diesel vehicles, a tachometer/dwell meter, propane enrichment kit, an ignition analyzer and timing light are not required.
- 13) Can multiple Data Acquisition Devices (DAD) be used on one computer?
No. Each DAD must be connected to its own computer.
- 14) Can a station set up their own OBD Inspection System (OIS)?
Yes. A station will be provided instructions on how to connect the DAD to the computer and how to connect to the State inspection web application. Certain circumstances may require a visit from a BAR field representative to initialize the OIS. The station will be responsible for the Internet connection.

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EQUIPMENT REQUIREMENTS - OBD Inspection System (OIS) Equipment (continued)

15) How will certificates be purchased?

Certificates will be purchased with the OIS in a similar way as the BAR-97. The station manager will be able to assign the role to manage certificate purchases to certain users. Certificates may be purchased through the OIS electronically in books of 50.

16) What information will the Data Acquisition Device (DAD) pull from the vehicle being inspected?

The DAD will collect all available emissions control system and vehicle identification information as requested by the State server.

17) If a vehicle's computer is changed and the VIN does not match the vehicle VIN, will the vehicle fail inspection?

Initially, the wrong VIN will not cause the vehicle to fail its Smog Check inspection, but it may cause a failure in the future.

18) Who will provide service to the DAD and other necessary equipment?

The BAR certified DAD vendor shall provide phone and Web-based technical support and a warranty that the DAD will be free of defects in materials and workmanship for a period of one (1) year from the date of delivery. The BAR certified DAD vendor shall respond to DAD customer inquiries within two (2) Business Hours of receipt of request.

The other equipment (computer, bar code scanner, and printer) is not BAR-certified, and therefore may be self-serviced, or may be serviced by any vendor offering to provide maintenance services.

19) Will the DAD allow for Bluetooth communication with the computer?

BAR certified DAD vendors are required to sell a hardwired DAD, and may (as an option) sell a wireless DAD. The type of wireless technology used is up to each DAD vendor.

20) Will the new equipment use a Vehicle Look-up Table (VLT) similar to the BAR-97?

The OIS will not use a Vehicle Lookup Table (VLT) like the BAR-97. VIN-based information will be used to activate any vehicle test exceptions.

21) How long can the DAD cable be extended?

The DAD cable(s) shall be fifteen feet (15') +/- six inches (6"), between the vehicle's OBD connector and the OIS computer. Additionally, DAD vendors may offer alternate BAR-certified cable lengths (original fifteen feet (15') cable must still be provided), as long as they are BAR- certified.

22) Can the BAR-97 still be used for testing?

The BAR-97 will continue to be used on gasoline-powered vehicles model-year 1999 and older, vehicles not equipped with OBD-II, vehicles over 14,000 GVWR, and vehicles with problematic OBD-II systems. The BAR-97 shall not be used to test vehicles model-years 2000 and newer that are equipped with OBD-II, or diesel-powered vehicles. The Smog Check Manual identifies which vehicles receive a BAR-97 or OIS inspection.

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EQUIPMENT REQUIREMENTS - OBD Inspection System (OIS) Equipment (continued)

23) How long will the BAR-97 continue to be used in the Smog Check program?

BAR anticipates the BAR-97 will continue to be used for a minimum of several more years to perform tailpipe testing (ASM, TSI) on vehicles not equipped with OBD-II systems, vehicles over 14,000 GVWR, and on pre-2000 vehicles.

24) Will any updates be required for the BAR-97 analyzer?

BAR-97 update(s) may be required in the future to keep the equipment capable of meeting Smog Check program objectives.

25) Will the BAR-97 updates allow for Internet connection instead of the phone line?

No. The BAR-97 will not be upgraded at this time to be able to communicate over an Internet connection. This upgrade would add significant cost to both stations and the State. Only the new OBD Inspection System (OIS) will use the Internet to communicate with BAR's central database (VID).

26) Will a BAR-97 be required when only testing 2000 model-year and newer vehicles?

Non-STAR stations are not required to have a BAR-97 if they choose to only inspect model-year 2000 and newer vehicles with an OIS. All STAR stations are required to have a BAR-97 in order to perform a tailpipe test on a fraction of 2000 and newer model-year vehicles, including vehicles over 14,000 GVWR, and vehicles lacking OBDII systems.

27) Will a NOx cell be allowed as a retrofit in BAR-97?

In the future, BAR may approve NOx cell use in BAR-97s.

STATION REQUIREMENTS

28) How will a consumer find the station that has the proper equipment to test their vehicle?

BAR anticipates that station advertising will continue to play a key role in alerting consumers about the types of vehicles that can be tested at each station. In addition, BAR's Station Locator on www.smogcheck.ca.gov may be used to locate STAR certified stations that are capable of inspecting any vehicle because they are required to have both a BAR-97 and an OBD Inspection System (OIS). Consumers may also locate a STAR station by looking for the STAR sign.

29) Can an auto parts store perform the OBD-focused test on model-year 2000 and newer vehicles?

Yes, provided that the auto parts store is registered with BAR as an Automotive Repair Dealer, is licensed as a Smog Check station, and employs a licensed Smog Check Inspector. The proposed regulations also require the OIS to be used within a building.

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STATION REQUIREMENTS (continued)

30) Why is inspection equipment (BAR-97 or OIS) not required at a Smog Check Repair-Only station?

Many repairs can be made and verified without the use of the BAR-97 OIS equipment. For example, a catalyst monitor can be run instead of performing a tailpipe test to diagnose an emissions problem and needed repairs. The station equipment requirements for inspections and repairs are specified in the "Equipment and Reference Material Requirements" table in the Smog Check Manual. Additional equipment may be required to inspect and/or repair certain vehicles in accordance with accepted trade standards.

INSPECTION PROCEDURES

31) Are pre-inspections allowed on OBD tests with a stand-alone scan tool?

Yes, pre-inspections can be performed with a stand-alone scan tool to aid the consumer in determining if their vehicle is ready for an official Smog Check inspection, or to aid the technician in identifying vehicles with the maximum number of incomplete readiness monitors. The OIS only performs official inspections, it does not have the capability to check monitor readiness outside of an official Smog Check inspection.

32) How will the OBD test failure criteria change?

Section 3340.42.2 of the proposed OBD inspection procedures lists the following failure criteria for OBDII-equipped vehicles:

- MIL does not illuminate when the ignition is on and the engine is off;

- MIL illuminates continuously or flashes with the engine running;

- OBD system reports the MIL as commanded on;

- OBD system reports a Diagnostic Trouble Code (DTC);

- OBD system data indicates the system has not yet been sufficiently operated to determine the presence or absence of a DTC;

- OBD system does not communicate with the EIS or OIS;

- OBD system data is inappropriate for the vehicle being tested;

- OBD system data does not match the original equipment manufacturer (OEM) or an Air Resources Board (ARB) exempted OBD software configuration;

OBD system reports incomplete readiness monitor(s) as specified below:

- (A) Gasoline-powered vehicles model-years 1996 through 1999 with more than one (1) incomplete monitor;

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INSPECTION PROCEDURES (continued)

(B) Gasoline-powered vehicles model-years 2000 and newer with any incomplete monitors, excluding the evaporative system monitor;

(C) Diesel-powered vehicles model-years 1998 through 2006 with any incomplete monitors;

(D) Diesel-powered vehicles model-years 2007 and newer with any incomplete monitors, excluding the particulate filter system monitor.

33) What percent of the Smog Check inspections are model-year 1999 and older vehicles versus model-year 2000 and newer vehicles?

The chart below is based on percent of initial inspections performed in calendar year 2011.

Model Years	Percent of Inspections
1976 to 1999	42%
2000 and newer	58%

34) What tests and equipment shall be used when inspecting vehicles with a BAR Referee label?

Vehicles with a BAR Referee label shall receive the same inspection as vehicles without a BAR label, unless the BAR label has specific inspection instructions.

35) Why are model-year 2000 and newer vehicles not required to have a tailpipe test when some of these vehicles fail a tailpipe test without having the Check Engine light illuminated?

Once test equipment is certified by BAR, an OBD test will be required in lieu of a tailpipe test on all 2000 and newer model-year vehicles except vehicles without OBDII systems or vehicles that have problematic OBDII systems. As a result, a tailpipe test will still be required on a fraction of 2000 and newer model-year vehicles including over 14,000 GVWR vehicles, those without OBDII systems, and possibly those with problematic OBDII systems.

36) Can a station refuse to test certain types of vehicles?

Yes, a Smog Check station can refuse to inspect or repair a vehicle when the station lacks the equipment, tools, or reference materials necessary to inspect or repair a particular vehicle. In addition, if, as a matter of policy, a repair station does not service certain types of vehicles or inspection failures. In each of these cases, the station must reject the vehicle before starting the inspection or repair.

37) Can a station choose to inspect only model-year 2000 and newer vehicles using the OBD Inspection System (OIS)?

Yes. Non-STAR stations may inspect only model-year 2000 and newer vehicles with the OIS.